



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/743,531	06/05/2001	Hirofumi Ohnari	010006	4037

23850 7590 05/28/2004

ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP
1725 K STREET, NW
SUITE 1000
WASHINGTON, DC 20006

EXAMINER

BUSHEY, CHARLES S

ART UNIT	PAPER NUMBER
----------	--------------

1724

DATE MAILED: 05/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/743,531	OHNARI, HIROFUMI	
	Examiner	Art Unit	
	Scott Bushey	1724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2004 and 13 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-4 and 6-10 is/are pending in the application.
- 4a) Of the above claim(s) 3(10), 4(10), 6, 7, and 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2, 3(2), 4(2), 8, and 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Newly submitted claims 10, 3(10), and 4(10) are directed to a species of the invention that is independent or distinct from the species of the invention originally claimed for the following reasons: The species as set forth by the originally presented and examined claims were not directed to the embodiment of the invention as depicted by Figures 1 and 2, having a cylindrical interior space without a baffle plate or partition plate.

Since applicant has received an action on the merits for the originally presented species of the invention i.e., the frusto-conical shaped interior space of Figure 3, this species of the invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 3(10), 4(10), and 10, as well as previously withdrawn claims 6 and 7, are withdrawn from consideration as being directed to a non-elected species of the invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 2, 3(2), 4(2), 8, and 9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. Specifically, independent claims 2, 8, and 9 have been amended by applicant to

Art Unit: 1724

include the phrases “directly impinged upon” or “directly impinging” relative to the interaction between the liquid and gas streams within the claimed device, which does not find support in the originally filed application papers. Supporting the Examiner’s holding of new matter with respect to the abovementioned phrases added to the claims, is applicant’s own remarks set forth on pages 8 and 9 of the remarks portion of the amendment filed March 15, 2004, wherein applicant states repeatedly how the addition of the phrases in question clearly change the scope of the claims and have been entered in an express attempt to overcome the prior art rejection based upon Fontein et al.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 2, 8, and 9 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Fontein et al (Figs. 1, 4a and 4b; col. 1, lines 31-36; col. 7, lines 1-19).

Applicant should note that the language added to the claims that has been held to be new matter above has not been given patentable weight herein with respect to the claims as now recited. However, even if such language (directly impinged upon or directly impinging) were given full weight and consideration, the applied prior art reference would still be considered to anticipate the claims rejected herein, since the gas and liquid phases of the reference clearly enter a device having the same structure as the claimed invention, the phases passing through the device in the same manner as in the claimed invention.

Art Unit: 1724

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3(2), 4(2), 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fontein et al.

Fontein et al (Figs. 1, 2, 4a and 4b; col. 1, lines 31-36; col. 3, lines 10-16, 38-41, 49-57, 72-75; col. 4, lines 12-15; col. 7, lines 1-19, 59-72) as has been applied above substantially disclose applicant's invention as recited by instant claims 3(2), 4(2), 8, and 9, except for the plural liquid inlets and their respective placement within the gas-liquid contacting apparatus as disclosed by Figure 1 of the reference. Fontein et al (Figs. 4a and 4b) do however envisage the use of multiple, tangential pressure liquid inlet streams placed along the circumferential wall of the contact space to improve contact between the phases. It would have been obvious for an artisan at the time of the invention, to provide the device of Figure 1 of the reference with plural, tangential liquid inlets along the circumferential wall of the contact space to improve contact between the phases, in view of the teachings envisaged within the same reference. Furthermore, although the reference is largely silent as to the dynamic mechanism through which contact between the phases occurs within the disclosed device, the fact that the applied reference teaches an apparatus that anticipates applicant's apparatus would suggest to one having ordinary skill in the art that the method of contact between the phases, as recited by instant claims 8 and 9, would have been obvious to one having ordinary skill in the art at the time of the invention.

Art Unit: 1724

Response to Arguments

8. Applicant's arguments filed March 15, 2004 have been fully considered but they are not persuasive.

Applicant's arguments have been directed solely to the language added to the claims, i.e., "directly impinging upon", which has been held to be new matter and has been treated in the rejection statements above.

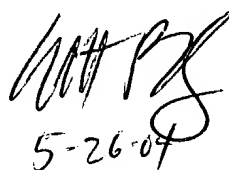
Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Bushey whose telephone number is (571) 272-1153. The examiner can normally be reached on Monday-Thursday 6:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine R. Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Scott Bushey
Primary Examiner
Art Unit 1724



5-26-04

csb
5-26-04